ROUTING AND RECORD SHEET

SUBJECT: (Optional)

Location of Cooling Towers in Future Headquarters Building Expansion STAT

FROM:
C/MS/HEB/RECD/OL
3E24 Headquarters

EXTENSION

NO.
OL 2 0247 STAT

DATE
22 January 1982

TO: (Officer designation, room number, and building)	DATE RECEIVED	DATE FORWARDED	OFFICER'S INITIALS	COMMENTS (Number each comment to show from whom to whom. Draw a line across column after each comment.)
1. C/HEB/RECD/OL 3E24 Hqs.	1/22	1/22	[illegible]	3 to 5
2. [redacted]				STAT
3. A C/RECD/OL [redacted]		1/25	[illegible]	The point made by Ron is extremely significant & hope something can be worked out to avoid the problem cited STAT
4.				
5. C/BPS/OL 4E50 Hqs.			[illegible]	
6. [redacted]		1/27	[illegible]	STAT
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

FORM 1-79 610 USE PREVIOUS EDITIONS.

22 JAN 1982

MEMORANDUM FOR: Chief, Building Planning Staff, OL

VIA: Chief, Headquarters Engineering Branch, RECD/OL

FROM: [redacted] STAT
Chief, Mechanical Section, HEB/RECD/OL

SUBJECT: Location of Cooling Towers in Future Headquarters Building Expansion

1. As indicated in the November 1982 Master Development Plan and Master Utility Systems Plan, the Powerplant cooling towers are to be relocated behind the new parking garage. Under this proposed plan, the cooling towers would be approximately 500 feet from and out of direct sight of the Powerplant.

2. With the future trend in this Agency towards electronic offices and small computer centers in addition to the expansion of central computer centers, the primary source of chilled water for air conditioning will be the Powerplant. Thus the reliability of operation of the Powerplant and in particular the chillers and cooling towers will become increasingly critical in the future. Therefore, in light of this fact and for the following reasons, it is recommended that the cooling tower location be reconsidered and that they be moved closer to the chillers in the Powerplant:

a. Cooling tower problems can show up first as high head problems at the chillers. In trouble-shooting these problems, maintenance personnel must physically check both the chillers and the cooling towers. Therefore, the response time to trouble-shoot and correct operational problems is less with the cooling towers located adjacent to the Powerplant than it would be with the cooling towers located 500 feet away.

b. Remote location of the cooling towers will make normal maintenance, routine inspection, and watch checks more time consuming and less convenient for the maintenance personnel which could result in the cooling towers getting less attention than is desirable.

c. Location of the cooling towers closer to the Powerplant will result in significant construction cost savings since less large pipe must be installed.

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Pumping costs will also be reduced somewhat due to the lower pump head required.

3. While the significance of the factors cited in paragraphs (a) and (b) above vary with the importance of the particular equipment involved, the cooling towers will be truly critical to the operation of this Agency. Therefore, these operational and maintenance factors become more critical to overall system reliability. Of course these factors can be reduced in importance to the extent that increasingly higher levels of maintenance and monitoring are provided at the Powerplant, something which would probably not occur should GSA remain on site in their present maintenance configuration.

4. Therefore, it is felt by the undersigned that the long-term system reliability of the chiller/cooling tower system would be decreased by locating the cooling towers remotely from the Powerplant. Aesthetically, placing the cooling towers behind the new parking garage places them only 350 feet further from the new building than their present location and still within sight of the building. While aesthetic considerations are important, in this case, it is felt that maximizing overall chilled water system reliability is more important to long-term Agency operations. Should chillers be located in the basement of the new building, the importance of locating their cooling towers as close to the chillers as possible remains critical for the same reasons outlined above. If there are any questions, please give me a call on extension

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